

Docket No.: SANZ-253

IN THE CLAIMS

1. (currently amended) A sputter arrangement comprising a magnetron and a target, in which magnetron and target can be moved relative to one another and the magnetron comprises a magnet system with at least one inner magnet and at least one outer magnet surrounding it, and in which the magnet system forms at least one closed plasma tube between an inner and an outer magnet, which includes two regions at a distance (C) from one another, which extend substantially perpendicularly to the direction of movement of the magnetron relative to a substrate and which have a diameter (d), ~~(D)~~ wherein with a relative movement between target and magnet system by a path  $\approx$  (C) the magnet system is laid out such that a width (B) of ends of the plasma tube ~~fulfills fulfill~~ the condition  $(B) \leq (d)$ .

2. (currently amended) A sputter arrangement comprising a magnetron and a target, in which magnetron and target can be moved relative to one another and the magnetron comprises a magnet system with at least one inner magnet and at least one outer magnet surrounding it, and in which the magnet system forms at least one closed plasma tube between an inner and an outer magnet, which includes two regions at a distance (C) from one another, which extend substantially perpendicularly to the direction of movement of the magnetron relative to a substrate and which have a diameter (d), wherein with a relative movement between target and magnet system by a path  $>$  (C) the magnet system is laid out such a width widths (B) of the ends of the plasma tube ~~fulfills fulfill~~ the condition  $(B) \leq 2(d)$ .

3 (previously presented) A sputter arrangement as claimed in claim 1, wherein the distance (C) between the two regions of the plasma tube is defined by the distance of two positions on the surface of the target in the direction of the relative movement, at which the component of the magnetic field vector perpendicular to the surface of the target is zero.

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4. (previously presented) A sputter arrangement as claimed in claim 1, wherein the diameter  $d$  of the plasma tube is defined by the distance of two positions on the surface and in the center of the longitudinal direction of the target in the direction of the relative movement, at which the field vector forms with the surface of the target an angle of approximately  $20^\circ$ .

5. (previously presented) A sputter arrangement as claimed in claim 1, wherein the width  $B$  of the ends of the plasma tube corresponds to the maximum distance of the positions on the surface of the target in the direction of the relative movement, at which the magnetic field vector forms an angle of approximately  $20^\circ$  with the surface of the target.

6. (previously presented) A sputter arrangement as claimed in claim 1, wherein the relative movement is a back and forth movement

7. (previously presented) A sputter arrangement as claimed in claim 1, wherein the outer magnet comprises two long parallel bar magnets, whose ends are terminated by two small bar magnets forming a roof.

8. (previously presented) A sputter arrangement as claimed in claim 7, wherein the inner bar magnet has a smaller diameter at its ends than at its center.

9. (previously presented) A sputter arrangement as claimed in claim 1, wherein three inner and several outer magnets are provided, and a region of a first outer magnet forms simultaneously a region of a second outer magnet and a region of the second outer magnet forms simultaneously a region of a third outer magnet.

10. (previously presented) A sputter arrangement as claimed in claim 9, wherein the first and the third outer magnet comprise in each instance two bar magnets disposed parallel to one another, of which the one bar magnet is shorter than the other, and that the ends of the two bar magnets are connected with one another by an L-form magnet configuration each.

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11. (previously presented) A sputter arrangement as claimed in claim 2, wherein the distance (C) between the two regions of the plasma tube is defined by the distance of two positions on the surface of the target in the direction of the relative movement, at which the component of the magnetic field vector perpendicular to the surface of the target is zero.
12. (previously presented) A sputter arrangement as claimed in claim 2, wherein the diameter d of the plasma tube is defined by the distance of two positions on the surface and in the center of the longitudinal direction of the target in the direction of the relative movement, at which the field vector forms with the surface of the target an angle of approximately  $20^\circ$ .
13. (previously presented) A sputter arrangement as claimed in claim 2, wherein the width B of the ends of the plasma tube corresponds to the maximum distance of the positions on the surface of the target in the direction of the relative movement, at which the magnetic field vector forms an angle of approximately  $20^\circ$  with the surface of the target.
14. (previously presented) A sputter arrangement as claimed in claim 2, wherein the relative movement is a back and forth movement.
15. (previously presented) A sputter arrangement as claimed in claim 2, wherein the outer magnet comprises two long parallel bar magnets, whose ends are terminated by two small bar magnets forming a roof.
16. (previously presented) A sputter arrangement as claimed in claim 15, wherein the inner bar magnet has a smaller diameter at its ends than at its center.
17. (previously presented) A sputter arrangement as claimed in claim 2, wherein three inner and several outer magnets are provided, and a region of a first outer magnet forms simultaneously a region of a second outer magnet and a region of the second outer magnet forms simultaneously a region of a third outer magnet.

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18. (previously presented) A sputter arrangement as claimed in claim 17, wherein the first and the third outer magnet comprise in each instance two bar magnets disposed parallel to one another, of which the one bar magnet is shorter than the other, and that the ends of the two bar magnets are connected with one another by an L-form magnet configuration each.

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